



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,916	06/27/2003	Yoshiaki Nishiya	223380	8116

23460 7590 04/19/2007  
LEYDIG VOIT & MAYER, LTD  
TWO PRUDENTIAL PLAZA, SUITE 4900  
180 NORTH STETSON AVENUE  
CHICAGO, IL 60601-6731

EXAMINER

DO, PENSEE T

ART UNIT PAPER NUMBER

1641

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/19/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/607,916

Applicant(s)

NISHIYA ET AL.

Examiner

Pensee T. Do

Art Unit

1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 8-13 and 15-24 is/are pending in the application.
- 4a) Of the above claim(s) 15-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6 and 8-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-4, 6, 8-13, 15-24 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Amendment Entry & Claims Status***

The amendment filed on January 10, 2007 has been acknowledged and entered.

Claims 1-4, 6, 8-13, 15-24 are pending.

Claims 15-24 are withdrawn from further consideration.

### ***Withdrawn Rejection(s)***

Rejection under nonstatutory double patenting is withdrawn herein.

Rejections under 102 by Yamanouchi, O'Horo, and Yudelso are withdrawn herein.

Rejections under 103 by O'Horo are withdrawn herein.

### ***New Grounds of Rejection***

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6, 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanouchi (US 5,804,357).

Yamanouchi teaches magnetic particles such as ferromagnetic iron oxides (claim 13) or co-coated magnetite with particle size range of 0.01-0.8  $\mu\text{m}$  (which is within the claimed range of 0.1-10  $\mu\text{m}$  of the present invention). The magnetic particles have a saturation magnetization of 50 to 100 emu/g (equivalent to 50 –100 A.m<sup>2</sup>/kg), which

Art Unit: 1641

covers the range of 10-80 emu/g claimed in the present invention and a coercive force range of 200-2000 oersted, which covers the claimed range of 0.8-15.92 kA/m (equivalent to 10-200 oersted) in the present invention. (see col. 22, line 43-col. 23, line 12). With regards to claims 2 and 4, it is inherent that the magnetic particles of Yamanouchi have the same functions or function the same ways as those claimed in claims 2 and 4 because Yamanouchi teaches the same magnetic particles with the same properties such as saturation magnetization and coercive force ranges, and size range. With regards to claim 9, Yamanouchi teaches that the magnetic particles are surface-treated with silica and/or alumina. (see col. 23, lines 10-12). Claim 10 is taught above.

However, Yamanouchi fails to teach that the magnetic particles having an aspect ratio of 1.0-1.2 and silica coating in a proportion of 3-100 wt%, aluminum content of 0.1-40 wt% of the total amount of silicon and aluminum.

It would have been obvious to one of ordinary skills in the art at the time the invention was made to prepare the magnetic particles in an aspect ratio of 1.0-1.2 and silica or silica/aluminum coating in a proportion of 3-100 wt%, or aluminum content of 0.1-40 wt% of the total amount of silicon and aluminum, since Yamanouchi teaches that the magnetic particles in their invention can be surface treated with silica and/or alumina and since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. Furthermore, Yamanouchi teaches the same magnetic particles made up of ferromagnetic iron oxide and having the same saturation

Art Unit: 1641

magnetization and coercive force ranges as well as same size range, it is obvious that the aspect ratio of the particles are the same because it is the make-up composition, e.g. aspect ratio, weight, etc. , of the magnetic particles that provides properties such as saturation magnetization and coercive force as well as size range.

### ***Response to Arguments***

Applicant's arguments filed January 10, 2007 have been fully considered but they are not persuasive.

Applicants argue that Yamanouchi fails to disclose the exact aspect ratio, silica coating proportion and aluminum content recited in the pending claims. Applicants further explain that an aspect ratio of 1.0-1.2 for a particle means that the particle is almost spherical. Yamanouchi only discloses an image-forming method on a silver halide light sensitive material. In such method, a magnetic particle is fixed on a film, and the data is recorded on the particle using a magnetic head and the like. It is important for magnetic particle in such technical field to have high coercive force, because the recorded data need to be stored as magnetic information on the particle. To increase the coercive force of the magnetic particles, the shape of the particle needs to be anisotropic. Therefore, making a spherical particle as required by the present invention is completely opposite to the normal development guidance in the technical field of Yamanouchi.

Yamanouchi teaches a coercive force range of 200-2000 oersted, which covers the claimed range of 0.8-15.92 kA/m (equivalent to 10-200 oersted) in the present invention. (see col. 22, line 43-col. 23, line 12). Such coercive force range in

Art Unit: 1641

Yamanouchi is at the lower end of the required force by the present invention. Thus, Yamanouchi does not need increase the coercive force of magnetic particles in his invention and thus the magnetic particles of Yamanouchi are not anisotropic. Thus, because the coercive force taught in Yamanouchi is within the range of the required force by the present invention, one of ordinary skills in the art would be motivated to arrive at the aspect ratio of 1.0-1.2.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pensee T. Do whose telephone number is 571-272-0819. The examiner can normally be reached on Monday-Friday, 8:00-4:00.

Art Unit: 1641

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pensee T. Do  
Patent Examiner  
April 13, 2007

  
LONG V. LE 04/26/07  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600